National Wetlands Inventory Map Report for Southeastern Idaho and Northern Utah:
Clark, Fremont, and Lemhi Counties, Idaho; Rich County, Utah.

Project ID: R01Y10P07: ID_digitizing_4.

Project area is restricted to portions of the following USGS 7.5 minute quadrangles:

CLARK COUNTY, ID

Blue Dome
Copper Mountain
Gardner Lake
Lidy Hot Springs
Scott Butte
Shamrock Gultch
Snaky Canyon
Spencer South

FREMONT COUNTY, ID

Big Grassy
Big Springs
Bishop Mountain
Blue Creek Reservoir
Crystal Butte
Hatchery Butte
Icehouse Creek
Island Park
Island Park Dam
Last Chance
Latham Spring
Lookout Butte
Porcupine Lake
Reas Pass
Sawtell Peak
Snake River Butte
Split Butte
Targhee Pass
Targhee Peak
Warm River
Warm River Butte

LEMHI COUNTY, ID

Eighteenmile Peak
Italian Canyon

RICH COUNTY, UT

Bear Lake South
Garden City
Sheeppen Creek

Source Imagery:

Citation: For all quads listed above:
Citation_Information:
Originator: USDA-FSA-APFO Aerial Photography Field Office
Publication_Date: 2009
Publication place: Salt Lake City, Utah
Title: Digital Orthoimagery Series of Idaho
Geospatial_Data_Presentation_Form: raster digital data
Other_Citation_Details: 1-meter, Natural Color and False Color

Collateral Data:

- USGS 1:24,000 topographic quadrangles
- USGS Digital raster graphics (DRG's)
- USDA NRCS - Web Soil Survey (Soils Dataset)

- USGS - NHD – National Hydrography Dataset

- USGS – DEM – Digital Elevation Model – 10 Meter resolution.

Inventory Method: The delineations were done "heads-up" in ArcMap using ARCGIS 10.1 and ERDAS Imagine 11.0 software on USGS digital ortho-photo quadrangles (DOQs) Natural Color imagery (1-meter ground resolution). Imagery for the DOQ production was acquired in 2009. Aerial photo interpretation and heads-up mapping were completed in the USFWS NWI Region 1 office in Portland, Oregon by Rick Griffin, SWCA Environmental Consulting. QC during the mapping was provided by Tim Griffith-O'Neill, SWCA Environmental Consulting. Final QA was provided by Bill Kirchner USFWS NWI, Region 1.

Field reconnaissance was conducted in July 2011. The purpose of the field work was to correlate varying signatures found on the photography to actual ground conditions. Vegetation, soils, and hydrologic conditions were examined at field sites.

Data Limitations: The user of the map is cautioned that, due to the limitation of mapping primarily through aerial photo interpretation, a small percentage of wetlands may have gone unidentified. Since the photography was taken during a particular time and season, there may be discrepancies between the map and current field conditions. Changes in landscape which occurred after the photography was taken would result in such discrepancies.

Classification: The wetland classifications that appear in the Idaho and Utah National Wetlands Inventory (NWI) Maps are in accordance with the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979).

General Description of the Project Area:

The project area is located in Land Resource Regions B and E. These correspond to Northwestern Wheat and Range Region and Rocky Mountain Range and Forest Region. The project area includes the communities of Island Park, ID and Bear Lake, Utah, plus several other rural communities and portions of Targhee and Cache National Forests. The primary economies of the region include grazing, forestry, tourism/recreation, and agriculture.

In this area, summer is warm and hot in most valleys and much cooler in the mountains. Summer precipitation falls as showers with some thunderstorms occurring. Winters are cold, but snow and freezing temperatures are not common except at higher elevations. Precipitation falls in the mountains throughout the year, and deep snowpack accumulates.

Summer temperatures range from an average daily minimum of 48 to 78 degrees and an average daily maximum temperature of 82 to 92 degrees. In winter, average daily minimum temperature is between 2 and 30 degrees and the average daily maximum temperature is between 4 and 34 degrees Fahrenheit.

The average annual precipitation varies between 7 and 12 inches within the Snake River Plain to 25 to 60 inches in the Central Rocky Mountains and Foothills. Maximum precipitation may reach 49 inches in the highest and wettest areas near Island Park Reservoir, ID, in the northeastern part of the project

area. A majority of the precipitation comes in the fall, winter, and spring in the form of snow, which varies widely throughout the area from 5 to 49 inches.

The major geologic features of the area are diverse from the Idaho Batholith and Challis Volcanics to the Yellowstone Formations and the Bear River Valley. These include loess deposits, glacial till, basaltic formations from the batholith outflows, and sedimentary and alluvial deposits from Lake Bonneville.

Description of wetlands: A diversity of wetlands occurs within the Southeastern Idaho project area. The complex geology of the region supports wet meadows, slope wetlands, sloughs, springs, lacustrine fringe wetlands, and palustrine wetlands adjacent to riverine systems. Wetland systems of Lacustrine, Riverine, and Palustrine are represented in the subject area. Deepwater habitats are areas that are permanently flooded and are characterized by open water on the aerial photography. These habitats are present in the Lacustrine and Riverine systems. Unvegetated wetlands, present in all systems, include bars, salt flats, and unconsolidated shores. Emergent wetlands occur in the Palustrine, and Lacustrine systems. There is a prevalence of wet meadow. Scrub-shrub and forested wetlands occur within the Palustrine systems. In the Palustrine system, these wetlands occur along the banks and floodplains of drainages, in bogs, at or below seeps and springs, and in depressions.

Description of attribute values: This table reflects classification to the class level and the water regime only. No intent is made to capture Subclasses in this table since subclass designations were made for each polygon associated with the geodatabase.

ATTRIBUTE	DESCRIPTION
L1UBH	Permanently flooded, deepwater habitat greater than 20 acres in size (e.g., natural lake).
L1UBHh	Permanently flooded, deepwater habitat greater than 20 acres in size that is created by an impoundment (e.g., reservoir).
L2ABH	Permanently flooded, open water lacustrine habitat extending from the shoreward boundary to a depth of 2 meters that is dominated by aquatic vegetation (e.g., *Lemna* spp*., Potamogeton* spp. and *Nymphaea* spp.).
L2EMF	Semi-permanently flooded, lacustrine habitat extending from the shoreward boundary to a depth of 2 meters that is dominated by erect, rooted, herbaceous hydrophytes (e.g., *Typha latifolia, Scirpus lacustris,* and *Scirpus americanus*).
L2UBH	Permanently flooded, open water habitat extending from the shoreward boundary to a depth of 2 meters.
PABF	Semi-permanently flooded ponds vegetated with aquatic beds (e.g., *Lemna* spp*., Potamogeton* spp. and *Nymphaea* spp.).
PABH	Permanently flooded ponds vegetated with aquatic beds (e.g., *Lemna* spp*., Potamogeton* spp. and *Nymphaea* spp.).
PABV	Permanently flooded ponds that are influenced by tidal fluctuation and are vegetated with aquatic beds (e.g., *Lemna* spp*., Potamogeton* spp. and *Nymphaea* spp.).
PEM/ABH	Permanently flooded depressions vegetated with a matrix of aquatic beds (e.g., *Lemna* spp., *Potamogeton* spp. and *Nymphaea* spp.) and erect, rooted, herbaceous vegetation (e.g., *Scirpus* spp*., Typha* spp., and *Juncus* spp*.)*.

PEM/FOC	Seasonally flooded depressions, banks and floodplains characterized by a matrix of persistent herbaceous and forested vegetation.
PEM/SSA	Temporarily flooded depressions, banks and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation.
PEM/SSC	Seasonally flooded depressions, banks and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation.
PEM/SSR	Seasonally flooded, freshwater tidal depressions, banks and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation.
PEM/USC	Seasonally flooded depressions characterized by a matrix of sparse, persistent herbaceous vegetation and areas of exposed unconsolidated substrate.
PEMA	Temporarily flooded wetlands dominated by persistent herbaceous vegetation. These areas are comprised of *Juncus* spp.*, Carex* spp.*, Eleocharis* spp.*, Rumex* spp.*, Equisetum* spp.*, Polyganum* spp.*, Potentilla anserina,* and *Phalaris arundinacea.*
PEMAdh	Temporarily flooded wetlands dominated by herbaceous vegetation. This code was applied to diked former tidelands that are now partially drained agricultural fields.
PEMB	Wetlands dominated by herbaceous vegetation in depressions, bogs, or below springs where the water table is usually at or near the surface.
PEMC	Seasonally flooded wetlands dominated by persistent herbaceous vegetation. These areas are comprised of *Juncus* spp.*, Carex* spp.*, Eleocharis* spp.*, Rumex* spp.*, Equisetum* spp.*, Polygonum* spp.*,* and *Phalaris arundinacea.*
PEMCdh	Seasonally flooded wetlands dominated by herbaceous vegetation. This code was applied to diked former tidelands that are now partially drained agricultural fields.
PEMF	Semi-permanently flooded depressions comprised of erect, rooted, herbaceous vegetation (e.g., *Scirpus* spp., *Typha* spp., *Carex* spp., and *Juncus* spp.).
PEMH	Permanently flooded depressions comprised of erect, rooted, herbaceous vegetation (e.g., *Scirpus* spp., *Typha* spp., and *Juncus* spp.).
PEMKh	Artificially flooded basin, located behind an impoundment that contains persistent herbaceous vegetation. (e.g., storm water detention pond).
PEMN	Regularly flooded, freshwater tidal flats consisting of *Scirpus acutus.*
PEMR	Permanently flooded depressions which are influenced by tidal fluctuations and are comprised of erect, rooted, herbaceous vegetation (e.g., *Scirpus* spp., *Typha* spp., and *Juncus* spp.).
PEMS	Temporarily flooded depressions which are influenced by tidal fluctuations and are comprised of erect, rooted, herbaceous vegetation (e.g., *Scirpus* spp., *Typha* spp., and *Juncus* spp.).
PEMT	Permanently flooded depressions which are influenced by tidal fluctuations and are comprised of erect, rooted, herbaceous vegetation (e.g., *Scirpus* spp., *Typha* spp., and *Juncus* spp.).
PFO/EMA	Temporarily flooded depressions and floodplains characterized by a matrix of forested and herbaceous vegetation.

PFO/EMB	Depressions, bogs, or floodplain areas characterized by a matrix of forested and herbaceous vegetation in which the soils remain saturated at or near the surface. These wetlands often occur below springs.
PFO/EMC	Seasonally flooded depressions and floodplains characterized by a matrix of forested and herbaceous vegetation.
PFO/SSA	Temporarily flooded depressions and floodplains characterized by a matrix of forested and scrub-shrub vegetation.
PFO/SSC	Seasonally flooded depressions and floodplains characterized by a matrix of forested and scrub-shrub vegetation.
PFO/SSR	Seasonally flooded, freshwater tidal depressions and floodplains characterized by a matrix of forested and scrub-shrub vegetation.
PFO/SSS	Temporarily flooded, freshwater tidal floodplains and banks dominated by a matrix of forested and scrub shrub vegetation.
PFOA	Temporarily flooded depressions and floodplains dominated by forested vegetation. Common palustrine forested species include *Fraxinus latifolia, Acer macrophyllum, Picea sitchensis, Pinus contorta, Thuja plicata,* and *Populus trichocarpa*.
PFOB	Saturated forested wetland usually associated with springs. Common tree species include willow and cottonwood.
PFOC	Seasonally flooded depressions and floodplains dominated by forested vegetation. Common palustrine forested species include *Fraxinus latifolia, Acer macrophyllum, Picea sitchensis, Pinus contorta, Thuja plicata,* and *Populus trichocarpa*.
PFOR	Seasonally flooded, freshwater tidal floodplains and banks dominated by forested vegetation. Common palustrine forested species include *Fraxinus latifolia, Acer macrophyllum, Picea sitchensis, Pinus contorta, Thuja plicata,* and *Populus trichocarpa*.
PFOS	Temporarily flooded, freshwater tidal floodplains and banks dominated by forested vegetation.
PSS/EMA	Temporarily flooded depressions and floodplains characterized by a matrix of scrub-shrub and herbaceous vegetation.
PSS/EMC	Seasonally flooded depressions and floodplains characterized by a matrix of scrub-shrub and herbaceous vegetation.
PSS/EMF	Semi-permanently flooded depressions and floodplains characterized by a matrix of scrub-shrub and herbaceous vegetation.
PSS/EMR	Seasonally flooded, freshwater tidal floodplains and banks that are comprised of scrub-shrub and herbaceous vegetation.
PSS/FOA	Temporarily flooded depressions and floodplains characterized by a matrix of scrub-shrub and forested vegetation.
PSS/FOC	Seasonally flooded depressions and floodplains characterized by a matrix of scrub-shrub and forested vegetation.
PSS/USA	Temporarily flooded floodplains and vegetated gravel bars characterized by a matrix of sparse scrub-shrub vegetation and unconsolidated substrate.
PSS/USC	Seasonally flooded floodplains and vegetated gravel bars characterized by a matrix of sparse scrub-shrub vegetation and unconsolidated substrate.
PSSA	Temporarily flooded scrub-shrub wetland typically found along drainages. Common scrub shrub species include *Salix* spp., *Alnus rubra, Spirea douglassi, Cornus stolonifera, Myrica californica,* and *Rubus spectabilis*.

PSSB	Saturated scrub-shrub wetland usually associated with springs or bogs.
PSSC	Seasonally flooded scrub-shrub wetland typically found along drainages. Common scrub shrub species include S*alix* spp., *Alnus rubra, Spirea douglassi, Cornus stolonifera, Myrica califonica,* and *Rubus spectabilis.*
PSSR	Seasonally flooded, freshwater tidal floodplains and banks that are dominated by scrub-shrub vegetation.
PSSS	Temporarily flooded, freshwater tidal floodplains and banks that are dominated by scrub-shrub vegetation.
PUBF	Semi-permanently flooded ponds.
PUBH	Permanently flooded ponds.
PUBK	Artificially flooded pond usually excavated and comprised of an artificial substrate (e.g., sewage detention pond).
PUBV	Permanently flooded ponds that are influenced by tidal fluctuation.
PUSC	Seasonally flooded basins with little or no vegetation.
PUSR	Seasonally flooded, freshwater tidal basins with little or non-persistent vegetation.
R1EMR	Seasonally flooded, freshwater tidal floodplains and banks that are characterized by erect, rooted, herbaceous vegetation.
R1UBV	Permanently flooded, tidally influenced riverine deepwater habitat.
R1USN	Regularly flooded, freshwater tidal floodplains and banks that are characterized by unconsolidated substrate and little or no vegetation.
R1USR	Seasonally flooded, freshwater tidal floodplains, banks, and sand bars that are characterized by unconsolidated substrate and little or no vegetation.
R2ABF	Areas along permanently flowing lower perennial rivers that are characterized as having aquatic beds and are semi-permanently flooded. Common species would include *Lemna* spp., *Potamogeton* spp. and *Nymphaea* spp.
R2ABH	Areas within permanently flowing lower perennial rivers that are characterized as having aquatic beds. Common species would include *Lemna* spp., *Potamogeton* spp. and *Nymphaea* spp.
R2UBH	Permanently flowing lower perennial rivers.
R2USC	Seasonally flooded unconsolidated substrate (e.g., sand bars) associated with lower perennial riverine systems.
R3RSC	Sections of upper perennial riverine systems that are characterized as having large boulders or bedrock substrate and receive seasonal flooding.
R3UBH	Permanently flowing upper perennial rivers.
R3USC	Seasonally flooded unconsolidated substrate (e.g., sand bars) associated with upper perennial riverine systems.
R4SBC	Seasonally flowing riverine channels.

Description of Special Modifiers:

SPECIAL MODIFIER	DESCRIPTION
b	Beaver - Wetland is created, modified or supported by the action of beavers. The beaver modifier is used on all delineations where visible hydrologic changes have occurred due to beaver activity.
d	Partially Drained - The water level has been artificially lowered, but the area is still classified as wetland because soil moisture is sufficient to support hydrophytes. This modifier is also used to indicate extensive ditch networks in wetlands where, due to the complexity or narrow width of the ditches, individual delineation is not possible.
f	Farmed - The soil surface has been mechanically or physically altered for production of crops, but hydrophytes will become re-established if farming is discontinued.
h	Diked/Impounded - Created or modified by a man-made barrier or dam which obstructs the inflow or outflow of water.
r	Artificial - Substrates classified as Rock Bottom, Unconsolidated Bottom, Rocky Shore and Unconsolidated Shore that were emplaced by man using natural or synthetic materials.
x	Excavated - Lies within a basin or channel excavated by man.

Partial list of wetland and riparian plant species with indicator status (USFWS 1988)**:**

Botanical Name	**Common Name**	**Indicator Status**
Acer glabrum	Rocky Mtn. maple	FAC
Acornus calamus	sweetflag	OBL
Alnus rubra	red alder	FACW
Achillea millefolium	yarrow	FACU
Carex rostratta.	beaked sedge	OBL
Cornus canadensis	bunchberry	FAC
Cyperus esculentes	chufa	FACW
Distichlis spicata	inland saltgrass	FAC
Eliocharis acicularis	least spikerush	OBL
Elymus glaucus	blue wildrye	FACU
Festuca idahoensis	Idaho festuca	UPL
Juncus effusus.	Soft rush	FACW
Deschampsia cespitosa	Tufted hairgrass	FACW

*Mentha arvenis**	field mint	FAC
Mimulus glabratus	monkeyflower	OBL
Myriophyllum verticillatum	Water milfoil	OBL
Nymphaea odorata	water lily	OBL
*Phalaris arundinacea**	reed canarygrass	FACW
Picea glauca	white spruce	FACU
Pinus contorta	lodgepole pine	FAC
Polygonum aviculare	smartweed	FACW
Populus balsamifera	black cottonwood	FAC
Poa annua	bluegrass	FAC
Populus trichocarpa	balsam poplar	FACW
Potamogeton crispus	Curly pondweed	OBL
Potentilla argentea	silver cinquefoil	FAC
Ranunculus arbortivus	Subalpine buttercup	FACW
Rosa piscarpa	rose	FACU
*Rubus procerus**	Himalaya blackberry	FAC
Rubus spectabilis	salmon berry	FAC
*Rumex crispus**	curly dock	FACW
Salix lasiandra	Pacific willow	FACW
Salix hookeranna	Hooker willow	OBL
Scirpus acutus	hardstem bulrush	OBL
Scirpus validus	Small flower bulrush	OBL
Spirea betulifolia	meadow spirea	NI
Thuja plicata	western red cedar	FAC
Triglochin palustre	marsh arrow grass	OBL
Typha angustifolia	cattail	OBL
Typha domingenesis	southern cattail	OBL
Utricularia macreorhiza	Common bladderwort	OBL
Vulpia myuros	foxtail fescue	FAC
Zizania aquatica	Annual wildrice	OBL
* *non-native - invasive*		

Regional specialized conventions: None.

Other discussion of mapping issues (image quality, water conditions, etc.): None.

References:

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. Laroe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States.* United States Department of the Interior, Fish and Wildlife Service, FWS/PBS 79/81, Washington, D.C.

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